



A COMPARATIVE PERFORMANCE ANALYSIS OF INDIAN MANUFACTURING AND SERVICE SECTORS COMPANIES

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ABSTRACT

The present study attempts a comparative performance analysis of Indian manufacturing and service sectors companies. To fulfil this objective, the present study has considered two sectors separately and comparison has been done on the basis of descriptive analysis and trend analysis. Firm's financial performance has been analysed with the help of Return on Assets (ROA) and Return on Equity (ROE). Tobin's Q (TQ) and Market to Book value (M/B) has been employed as a measurement indicator for a firm's valuation. This study also considers Firm size, leverage, growth and liquidity and compare by applying ratio analysis. The study shows that all the financial performance (Return on Assets and Return on Equity) & valuation ratios (Tobin's Q and Market to Book value) of the manufacturing companies are better than the service companies during the study period. The study also shows that the sales growth and leverage of the manufacturing companies is higher than the service companies during the study period. But the total assets and liquidity of the service companies are higher than the manufacturing companies' average during the study period. This implies manufacturing companies are more efficient in assets management and shareholders' fund management than the service companies. The manufacturing companies are also more efficient to fulfil a growth strategy and give investors a positive approach regarding the firm's growth opportunity than the service companies as a whole.

KEYWORDS: Manufacturing And Service Sectors Companies, Financial Performance, Firm's Valuation,

INTRODUCTION

The pillar of any organization is its performance. No business can survive without earning adequate profit. It means how they are acquiring the funds and utilizing it's in an effective utilization. So, continuous monitoring is required to take corrective measures to meet the short term and long-term requirements adequately.

I have taken Indian listed companies in manufacturing and service sectors to make a comparative study of performance in these two sectors. The reason for choosing these two sectors is that they stand in two diagonally opposite directions. Manufacturing sector being a traditional old timer, companies in this sector comparatively have more average age than the service sector. Manufacturing sector is also more capital intensive compared to the service sector.

LITERATURE REVIEW

Gupta, S. and Sharma, R.K.(2012) in their study highlighted that the issue related to current practices used by ONGC to determine the prices of crude oil, natural gas and value-added products and also the various types of direct and indirect taxes imposed and paid by the company.

Thakor, D.R (2014) revealed that for seventeen sugar manufacturing units in the state of Gujarat, liquidity was low but operating profit showed better results than net profit ratio.

Khatik, S.K. and Thakur,V.(2017) in their study shows the profitability position of oil and natural gas corporation limited.

It is found that operating profit is valuable for the company, management and stakeholders while return on capital employed is valuable for outsider's stakeholders.

Doley, R.S. (2018) in their study shows that gross profit ratio, net profit ratio, operating profit ratio, return on gross capital employed ratio, interest coverage ratio, operating ratio, total assets turnover ratio and operating expense ratio, ratios of Bharat Petroleum Corporation Limited is higher as compared to Hindustan Petroleum Corporation Limited during the period of five years. Only the operating ratio of Hindustan Petroleum Corporation Limited is higher than Bharat Petroleum Corporation Limited during the same period.

Various researches have been conducted on performance, but the results have been mixed and inconclusive. Disclosure norms adopted by companies are heterogeneous in nature and vary from industry to industry. So, the present study has been undertaken to fill the research gap.

OBJECTIVES OF THE STUDY

The present study aims at examining and comparing the performance (Financial performance, firm's valuation, Firm size, leverage, growth and liquidity) between Indian manufacturing and service sectors companies.

HYPOTHESES OF THE STUDY

The following hypotheses have been formulated:

HO1: There is no significant difference of Financial performance between Indian manufacturing and service sectors companies during the study period.

HO2: There is no significant difference of Firm's valuation between Indian manufacturing and service sectors companies during the study period.

HO3: There is no significant difference of liquidity between Indian manufacturing and service sectors companies during the study period.

HO4: There is no significant difference of leverage between Indian manufacturing and service sectors companies during the study period.

HO5: There is no significant difference of Firm size between Indian manufacturing and service sectors companies during the study period.

HO6: There is no significant difference of Growth between Indian manufacturing and service sectors companies during the study period.

Database and Methodology:

Source of Data: The study is based on the secondary data. Data have collected from the annual reports of the sample companies as well as collect from Capital line database. The sampling design for collection of secondary data is a convenient sampling. The Indian Listed Companies are divided into two groups - manufacturing companies and service sector companies. I have selected 15 companies from each sector on the basis of average market capitalization from listed in NSE and BSE. These companies are selected on the basis of their (2010-2019) ten years average market capitalization.

Period of the Study: The study has been covered a period of ten years starting from the financial year 2010 to 2019.

VARIABLES USED IN THE STUDY:

The study introduces a number of important variables to proxy performance of Indian - manufacturing companies and service sector companies.

Performance Variables

The performance of Indian - manufacturing companies and service sector companies are measured through four ratios namely Return on assets (ROA), Return on equity (ROE), Tobin's Q (TQ) and Market to Book value (M/B). The indicators employed for a firm's financial performance are ROA and ROE. The financial performance is based on a great degree of control. Return on assets indicates the effectiveness of the company's assets in increasing the shareholders' earnings. ROA is measured by dividing Earnings before interest & taxes (EBIT) by its total assets. Return on equity measures a company's profitability revealing how much profit a company generated with the money that shareholders have invested. It is the relationship between profit after tax and net worth. Tobin's Q and M/B have been employed as measurement indicators for

the firm's valuation. It is based on changes in market valuation and stock decline. Tobin's Q is used as a market-based measure. It is the ratio of a company's market value to its book value of assets. The company's market value is calculated as the book value of assets minus the book value of equity plus the market value of equity. The market-to-book ratio compares a company's market value to its book value. The book value is the value of assets minus the value of the liabilities.

Control Variables

A number of control variables are used in the study to control for a firm's characteristics that may affect the firm's performance. The study used firm size, leverage, liquidity and growth as control variables. Firm size is measured by Natural logarithm of Total Assets. Leverage is measured by debt equity ratio. This study measures liquidity by using Current ratio. It is the relation of the amount of current assets to the amount of current liabilities. Growth is measured by growth of sales. It is calculated by dividing present value of sales minus past value of sales by its past value of sales.

METHODOLOGY:

To fulfil this objective, the present study has considered two sectors separately and comparison has been done on the basis of descriptive analysis and trend analysis.

The statistical techniques applied in this study are descriptive statistics, which comprise the analysis of the overall mean, minimum, maximum, standard deviation and coefficient of variance for each individual variable. The mean, minimum, maximum, standard deviation and coefficient variance measure the central tendency of the variable. Coefficient of variation has used to get fluctuations or variation about the mean values of the financial variables.

For identifying the nature of the trend in each of the selected variable during the period under study linear trend equation was fitted and in order to examine whether the slopes of the trend lines were statistically significant or not t-test was used. The trend analysis has been made with the help of SPSS Package.

FINDINGS

Comparative Analysis of Firm performance:

Firm's financial performance has been analysed with the help of Return on Assets (ROA) and Return on Equity (ROE). Tobin's Q (TQ) and Market to Book value (M/B) has been employed as a measurement indicator for a firm's valuation. The Comparative performance of the selected Indian manufacturing and service sectors companies has been presented in Table 1. In manufacturing companies, the average return on assets is 18.42%, which is greater than the average return on assets of service companies 17.17%. The selected manufacturing companies are more efficient in assets management than the service companies. The fluctuation of ROA in manufacturing companies is greater than the service companies during the study period.

In manufacturing companies, the average return on equity is 23.92%, which is greater than the average return on equity of

the service companies 18.73%. This implies manufacturing companies are more efficient in shareholders' fund management than the service companies. The fluctuation of ROE in service manufacturing companies is greater than the manufacturing companies during the study period.

In manufacturing companies, the average Tobin's Q is 3.88%, which is greater than the average Tobin's Q of the service companies 3.33%. The fluctuation of TQ in manufacturing companies is greater than the service companies during the study period. In manufacturing companies, the average M/B is 6.76%, which is greater than the average M/B of the service companies 4.65%. This implies manufacturing companies are more efficient to fulfil a growth strategy and gives investors a positive approach regarding the firm's growth opportunity than the service companies as a whole. The fluctuation of M/B in service manufacturing companies is greater than the manufacturing companies during the study period.

The fluctuation of ROE and M/B in service sector companies is more than the manufacturing companies but the fluctuation of ROA and TQ in manufacturing companies is greater than the service companies as a whole.

In performance analysis, the study shows that all the financial performance & valuation ratios of the manufacturing companies are better than the service companies during the study period. This implies manufacturing companies are more efficient in assets management and shareholders' fund management than the service companies. The manufacturing companies are also more efficient to fulfil a growth strategy and give investors a positive approach regarding the firm's growth opportunity than the service companies as a whole.

Year	Manufacturing Sector				Service Sector			
	Return on Assets (ROA)	Return on Equity (ROE)	Tobin's Q (TQ)	Market Value to Book Value (M/B)	Return on Assets (ROA)	Return on Equity (ROE)	Tobin's Q (TQ)	Market Value to Book Value (M/B)
2010	17.95	24.74	2.84	4.74	16.68	15.09	3.46	5.08
2011	15.42	22.75	2.92	5.01	17.26	-2.05	3.45	11.69
2012	15.15	21.16	2.84	4.90	17.87	28.52	2.90	-1.52
2013	15.46	24.53	2.97	5.82	16.76	18.55	2.99	0.35
2014	15.89	23.29	3.35	6.37	16.45	19.11	3.08	2.74
2015	16.76	23.42	4.21	8.06	17.64	18.36	3.70	3.11
2016	17.15	19.17	3.75	5.63	18.74	41.00	3.52	9.68
2017	18.42	23.37	5.14	9.00	16.86	18.92	3.63	7.17
2018	23.87	26.84	5.55	9.26	16.57	15.46	3.35	4.23
2019	28.14	29.94	5.18	8.83	16.88	14.32	3.19	4.01
Minimum	15.15	19.17	2.84	4.74	16.45	-2.05	2.90	-1.52
Maximum	28.14	29.94	5.55	9.26	18.74	41.00	3.70	11.69
Average	18.42	23.92	3.88	6.76	17.17	18.73	3.33	4.65
Standard Deviation	4.26	2.95	1.08	1.83	0.72	10.89	0.27	4.01
Coefficient of Variation (CV)	23.14	12.33	27.75	27.08	4.183	58.152	8.233	86.138

Source: Calculated by the Author

Table 1: Comparative Performance Analysis between Selected Manufacturing Sector and Service Sector Companies

Comparative Analysis of Control Variables:

A number of control variables are used in the study to control for firm's characteristics that may affect the firm's performance. This study considers Firm size, leverage, growth and liquidity as control variables. The firm's characteristics of the selected Indian manufacturing and service sectors companies have been presented in Table 2.

In liquidity analysis, the study found that the current ratio of the service companies is higher than the manufacturing companies' average during the study period, which implies holding more current assets in relation to current liabilities than manufacturing companies' average.

In Firm size analysis, the study shows that the total assets of the service companies are higher than the manufacturing companies' average during the study period. This implies they have higher investment in total assets than manufacturing companies, which increase the agency cost.

In leverage analysis, the study found that the debt equity ratio of the manufacturing companies is more than the service companies, which implies manufacturing companies are creating excessive interest and direct supervised by lenders then service companies.

In growth analysis, the study shows that the sales growth of the manufacturing companies is higher than the service companies during the study period. This implies manufacturing companies have increased sales more efficiently than service companies, which will improve the performance of the firm.

Year	Manufacturing Sector					Service Sector				
	Liquidity	Leverage	Natural Logarithm of Total Assets (Ln TA)	Natural Logarithm of Sales (SIZE)	Growth of Sales	Liquidity	Leverage	Natural Logarithm of Total Assets (Ln TA)	Natural Logarithm of Sales (SIZE)	Growth of Sales
2010	2.11	0.40	8.88	8.83	11.62	2.45	0.54	9.84	8.22	18.09
2011	2.13	0.43	9.04	9.00	19.65	1.47	1.52	9.16	8.43	21.65
2012	2.12	0.50	9.21	9.22	21.90	2.03	-0.62	9.27	8.55	15.46
2013	2.16	0.50	9.32	9.37	16.16	2.04	-0.51	9.41	8.63	9.83
2014	1.80	0.39	9.41	9.44	7.15	2.84	0.05	9.52	8.76	14.56
2015	2.00	0.38	9.45	9.47	4.47	2.62	0.06	9.60	8.86	10.96
2016	2.13	0.22	9.55	9.63	-2.29	2.73	0.41	9.63	8.96	10.85
2017	1.70	0.23	9.61	9.65	5.42	2.64	0.40	9.71	9.03	6.89
2018	1.85	0.17	9.80	9.77	30.30	2.44	0.36	9.92	9.10	9.72
2019	2.15	0.17	9.96	9.97	32.60	2.32	0.37	10.00	9.25	16.58
Minimum	1.70	0.17	8.88	8.83	-2.29	2.32	-0.62	9.04	8.22	6.89
Maximum	2.15	0.50	9.96	9.97	30.30	3.47	1.52	10.00	9.25	21.65
Average	2.06	0.33	9.42	9.39	15.09	2.74	0.28	9.53	8.78	13.41
Standard Deviation	0.22	0.13	0.13	0.12	13.35	0.33	0.57	0.31	0.13	4.60
Coefficient of Variation (CV)	10.53	38.98	1.40	1.45	88.52	12.19	204.09	3.28	1.71	34.33

Source: Calculated by the Author

Table 2: Comparative Control variables Analysis between Selected Manufacturing Sector and Service Sector Companies, 2010 to 2019

Comparative Trend Analysis:

Table 3 presents the Comparative Trend analysis. From the trend analysis of the selected manufacturing companies, it is found that the growth rates of performance (Return on assets, Tobin's Q and Market to Book value) except Return on Equity, shows a significantly increasing trend. But in trend analysis of service sectors companies, it is found that the trend equations do not give good fits.

From trend analysis of the leverage, the manufacturing companies show a significant decreasing trend but the service

sector companies show a downward trend but not significant. In liquidity analysis, the service sector companies show a significant decreasing trend but the manufacturing companies show a downward trend but not significant. In trend analysis of growth of sales, it is found that the service sector companies have a significant decreasing trend, but in case of manufacturing companies failed to identify any significant upward trend respectively during the study period. In size analysis, the growth rate of manufacturing companies is higher than the service sector companies.

Variable	Manufacturing Sector					Service Sector				
	Adj R2	DW	F	Year (b)	GROWTH	Adj R2	DW	F	Year (b)	GROWTH
ROA	0.5	1.019	9.987**	1.049**	5.69**	-0.124	1.803	0.005	-0.006	-0.03
ROE	0.092	1.169	1.907	0.427	1.79	-0.067	2.32	0.431	0.814	4.35
TQ	0.838	1.872	47.622*	0.328*	8.45*	-0.087	1.318	0.276	0.017	0.51
MB	0.754	3.003	28.583*	0.534*	7.9*	-0.123	1.982	0.017	0.06	1.29
LEN	0.734	1.068	25.816*	-0.038*	-11.52*	-0.118	2.035	0.047	-0.014	-5.00
LQ	-0.114	2.28	0.082	-0.007	-0.34	0.266	2.292	4.265***	(-)0.065**	(-)2.37**
GROWTH	-0.066	1.018	0.442	1.009	6.31	0.245	1.543	3.924***	(-)0.872**	(-)6.50**
SIZE	0.973	1.01	331.068*	0.108*	1.15*	0.982	1.466	503.366*	0.102*	1.07*

Note: * 1% Significance level; ** 5% Significance level; *** 10% Significance level

Source: Calculated by the Author

Table 3: Comparative Trend Analysis between Selected Manufacturing Sector and Service Sector Companies

CONCLUSION

In this study I have compared Performance Analysis of selected manufacturing companies with service companies in India. To fulfil this objective, we have considered two sectors separately and comparison has been done on the basis of descriptive analysis, trend analysis. In performance analysis, the study shows that the manufacturing companies are more efficient in asset management and shareholders' fund management than the service companies. They are also more efficient to fulfil a growth strategy and give investors a positive approach regarding the firm's growth opportunity than the service companies as a whole. The debt equity ratio and the sales growth of the manufacturing companies is more than the service companies, implies manufacturing companies are creating excessive interest and direct supervision by lenders than service companies and they increased sales more efficiently than service companies, which will improve the performance of the firm. But the current ratio and the total assets of the service companies is higher than the manufacturing companies' average during the study period, which implies service companies have ideal current assets, from which no return is obtained and higher investment in total assets increases the agency cost, as a result the profitability of the firm decreases.

Limitation of the study:

The present study has certain limitations. It is an empirical study between selected manufacturing companies and service companies in India. Secondly, the period of study is limited to ten years from 2010 to 2019. The full dependence on reliability of secondary sources of data poses another limitation of the present study.

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